

Product Data Sheet

Actuator

IA5



- ◆ IA5 is a high speed AC powered linear actuator designed with stainless steel extension tube, which is suitable for various outdoor industrial applications, such as construction machine, air bridge, mining transportation conveyor... etc. It also features its heavy load capability and low current deviation. The adjustable limit switches are equipped for users to fine-tune the stroke based on their needs. Ball screw or ACME screw threaded spindle is available for users to choose.
- ◆ Main applications : Industrial
- ◆ Input voltage : 115 V / 60Hz ; 230 V / 50Hz
- ◆ Max. dynamic load : 3,500N (ACME), 7,000N (Ball screw)
- ◆ Max. static load : 4,500N (ACME), 13,600N (Ball screw)
- ◆ Max. current : 3.5A @ 115V AC
- ◆ Max. speed : 52.8mm/sec @ no load
- ◆ Stroke : 102~610 mm
- ◆ Duty cycle : 25% or 4 min. continuous operation in 12 min.
- ◆ Working temperature range : -26°C ~ +65°C
- ◆ IP protection level : IP54
- ◆ Color : Black
- ◆ Certified : UL E362815, RoHS, EN61000-3, EN61000-4, EN6100-6, EN60335-1
- ◆ Overload protection by clutch
- ◆ Power wire length : 600mm (with tinned wires)

Options

- ◆ IP65
- ◆ Potentiometer, analog positioning feedback
- ◆ Adjustable limit switches (IP65 grade is not allowed for users to adjust limits switches)
- ◆ Optional or Customized Front/Rear Mounting Bracket

Compatibility

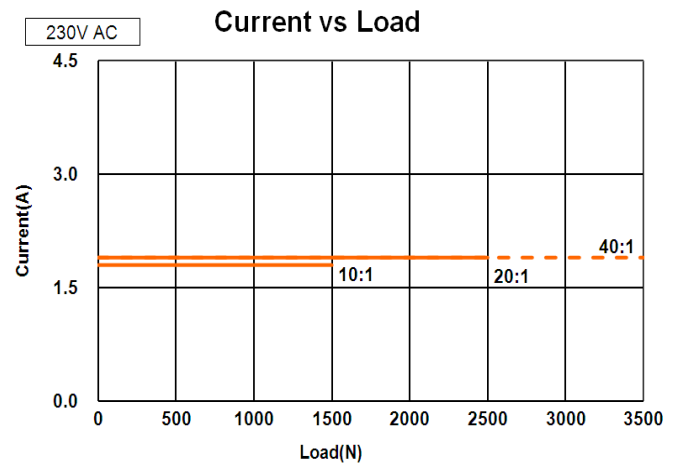
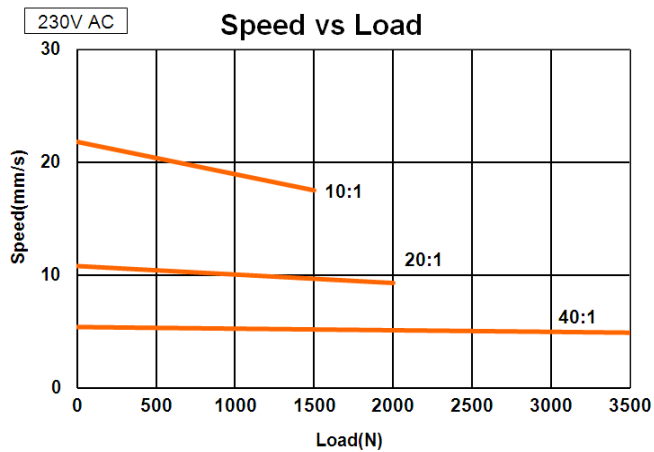
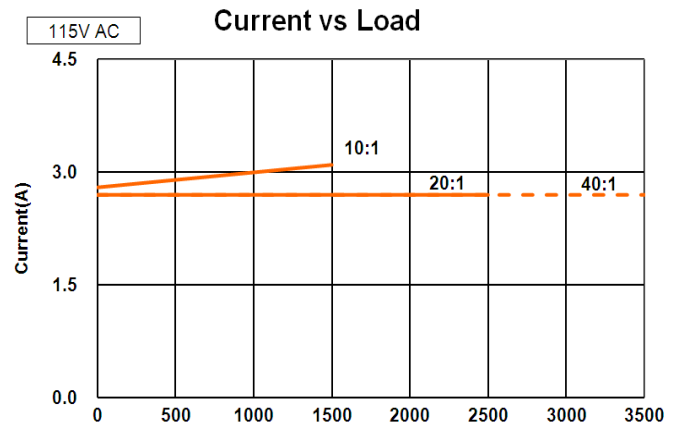
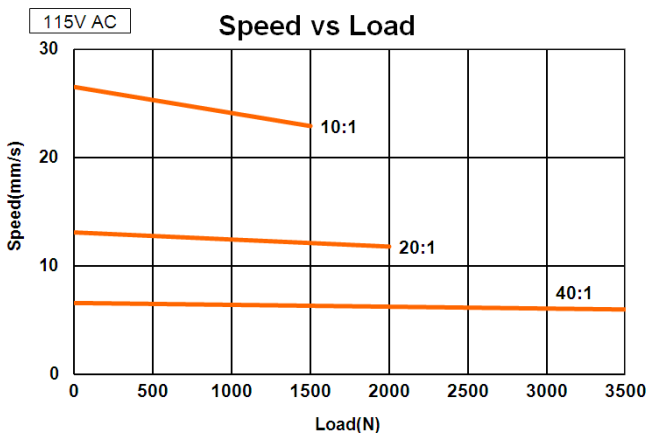
- | | |
|----------------|--------------|
| 1. Control Box | 2. Accessory |
| None | None |



Performance Data

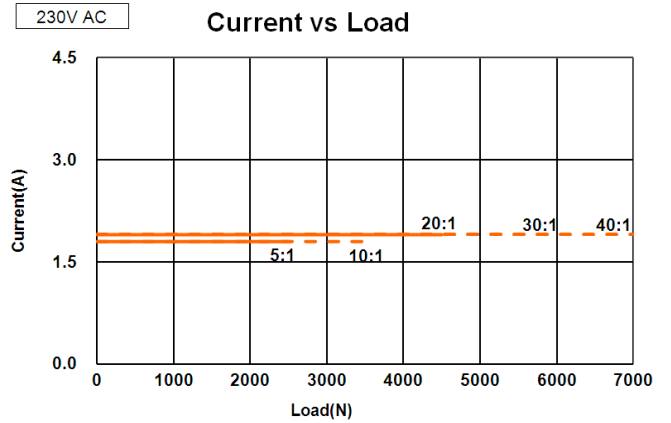
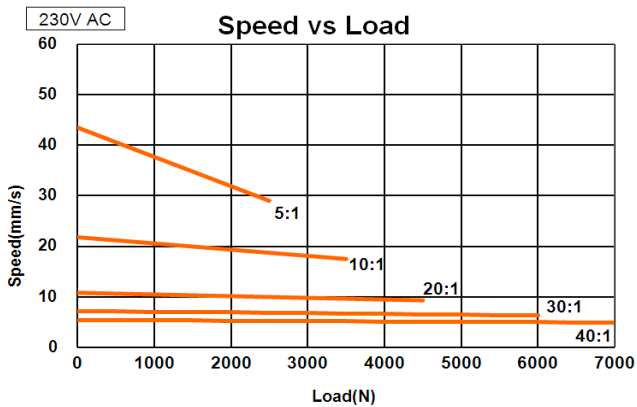
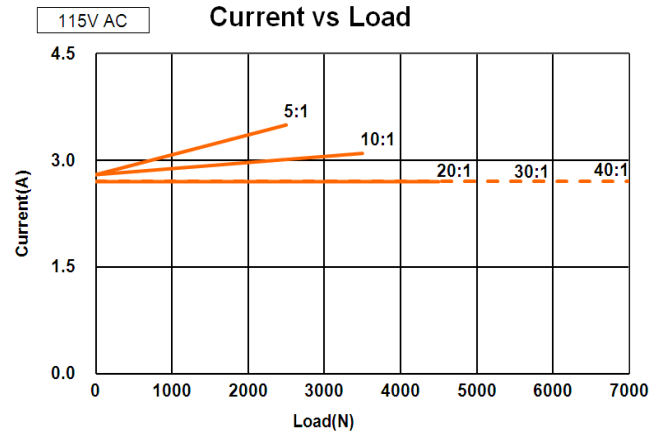
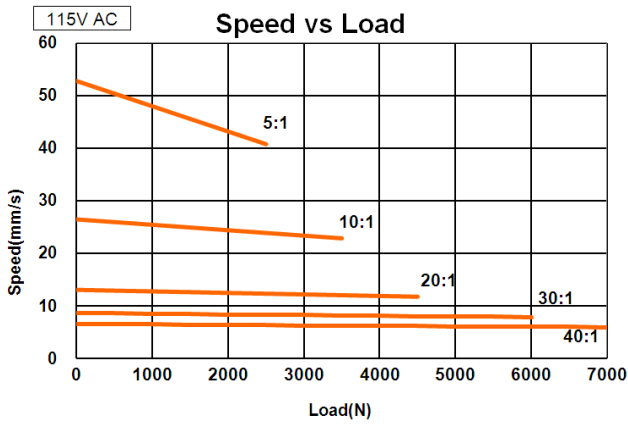
◆ IA5 ACME

Model No.	Push/Pull Max. (N)	Speed (mm/s)				Current (A)			
		115V		230V		115V		230V	
		No load	Full Load	No load	Full Load	No load	Full Load	No load	Full Load
IA5-XXX-10-A-XXX	1500	26.5	22.9	21.8	17.5	2.8	3.1	1.8	1.8
IA5-XXX-20-A-XXX	2500	13.1	11.8	10.8	9.3	2.7	2.7	1.9	1.9
IA5-XXX-40-A-XXX	3500	6.6	6.0	5.4	4.9	2.7	2.7	1.9	1.9



◆ IA5 Ball Screw

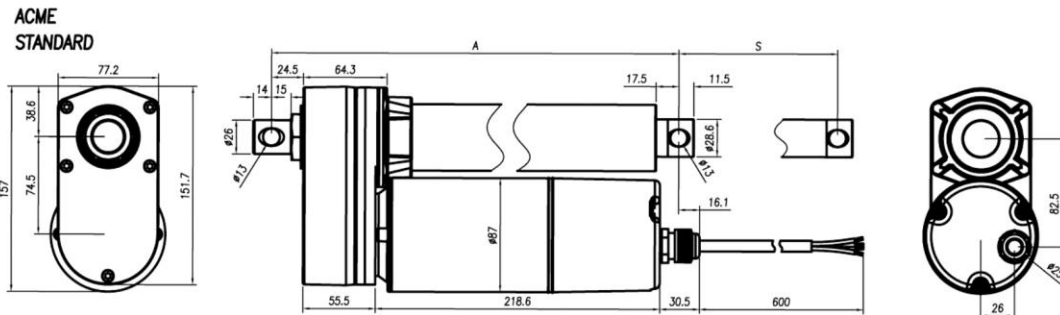
Model No.	Push/Pull Max. (N)	Speed (mm/s)				Current (A)			
		115V		230V		115V		230V	
		No load	Full Load	No load	Full Load	No load	Full Load	No load	Full Load
IA5-XXX-05-B-XXX	2500	52.8	40.8	43.5	29.0	2.8	3.5	1.8	1.8
IA5-XXX-10-B-XXX	3500	26.5	22.9	21.8	17.5	2.8	3.1	1.8	1.8
IA5-XXX-20-B-XXX	4500	13.1	11.8	10.8	9.3	2.7	2.7	1.9	1.9
IA5-XXX-30-B-XXX	6000	8.7	7.9	7.2	6.3	2.7	2.7	1.9	1.9
IA5-XXX-40-B-XXX	7000	6.6	6.0	5.4	4.9	2.7	2.7	1.9	1.9



Dimensions IA5 ACME types

◆ Standard

	4"	6"	8"	10"	12"	18"	24"
Stroke (S±2.5mm)	102	153	203	254	305	457	610
Retracted Length (A±3.8mm)	262	313	364	414	465	668	821

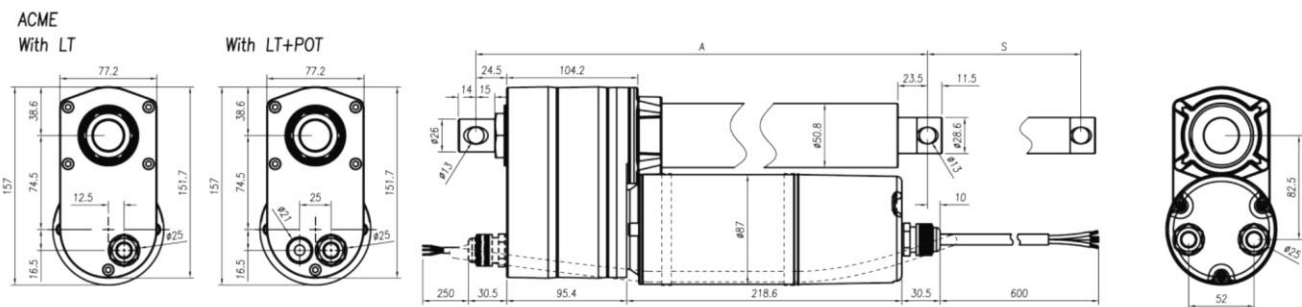


◆ With potentiometer (POT) only

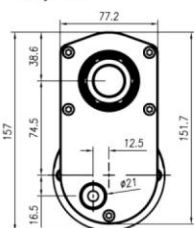
	4"	6"	8"	10"	12"	18"	24"
Stroke (S±2.5mm)	102	153	203	254	305	457	610
Retracted Length (A±3.8mm)	302	353	404	454	505	708	861

◆ With limit switches or with both limit switches and POT

	4"	6"	8"	10"	12"	18"	24"
Stroke (S±5.0mm)	102	153	203	254	305	457	610
Retracted Length (A±5.0mm)	359	410	460	511	613	765	918



ACME Only POT



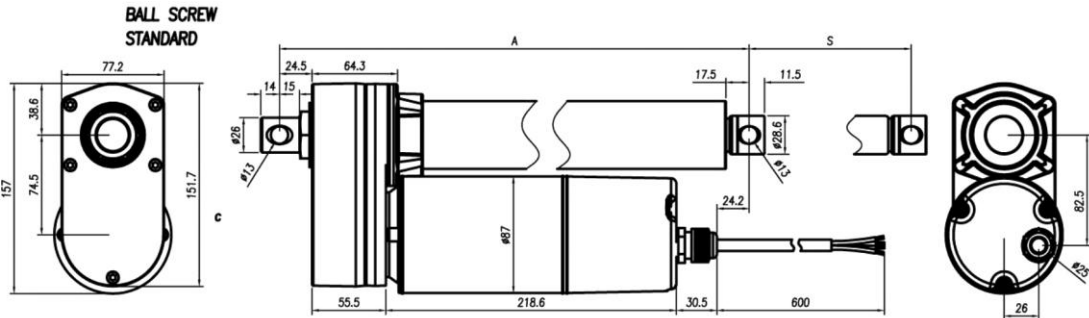
Unit: mm



IA5 Ball Screw types

◆ Standard

	4"	6"	8"	10"	12"	18"	24"
Stroke (S±2.5mm)	102	153	203	254	305	457	610
Retracted Length (A±3.8mm)	302	353	404	455	506	735	888

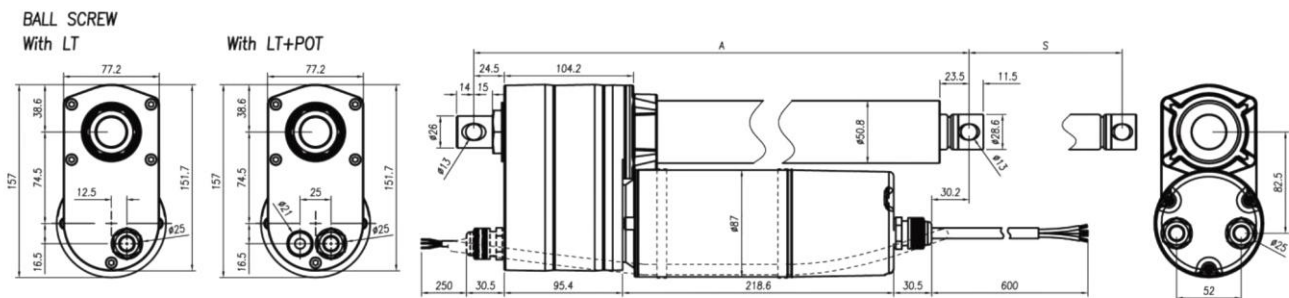


◆ With potentiometer (POT) only

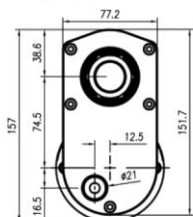
	4"	6"	8"	10"	12"	18"	24"
Stroke (S±2.5mm)	102	153	203	254	305	457	610
Retracted Length (A±3.8mm)	342	393	444	495	546	775	928

◆ With limit switches or with both limit switches and POT

	4"	6"	8"	10"	12"	18"	24"
Stroke (S±5.0mm)	102	153	203	254	305	457	610
Retracted Length (A±5.0mm)	399	450	501	552	680	832	985



BALL SCREW Only POT

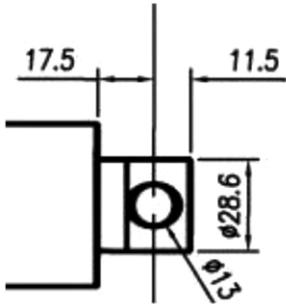


Unit: mm

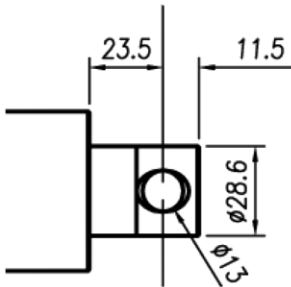


Front connector

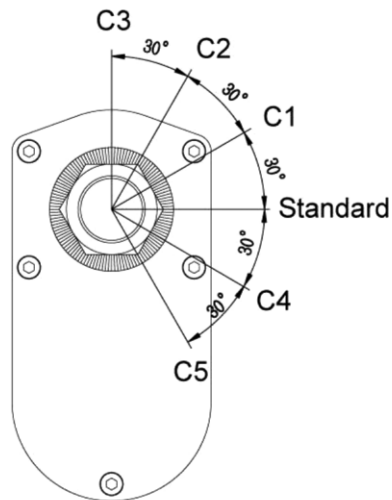
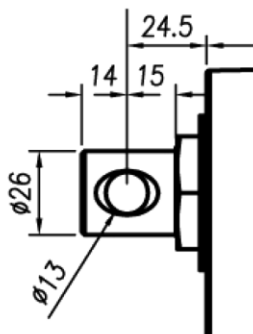
- ◆ Standard or with POT only



- ◆ With limit switches or with both limit switches and POT



Rear connector and the orientation of clevis



Unit: mm

Wiring

- ◆ Please refer to IA5 User Guide.



Ordering Key

IA5 — □ □ □ — □ □ — □ — □ □ □ — □ □ □ □ □ □ □ □ — □ □

Input Voltage

115 : 115V AC
230 : 230V AC

Gear Ratio

05 : 5:1(Ball screw only)
10 : 10:1
20 : 20:1
30 : 30:1(Ball screw only)
40 : 40:1

Spindle Type

A : ACME
B : Ball Screw

Stroke

102 : 102mm
153 : 153mm
203 : 203mm
254 : 254mm
305 : 305mm
457 : 457mm
610 : 610mm

Option

Blank : None
LT : Limit switch
POT : Potentiometer
IP65 : IP65

Rear Clevis Orientation

Blank : 0° (Standard)
C1 : 30° CCW (view from rear connector)
C2 : 60° CCW
C3 : 90° CCW
C4 : 30° CW
C5 : 60° CW

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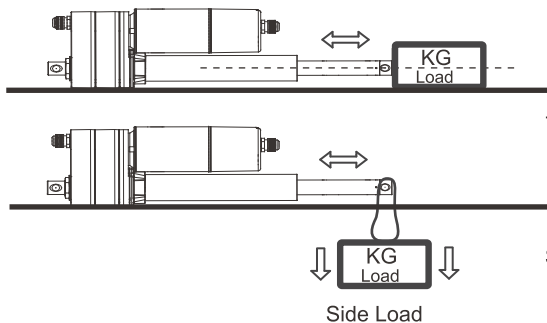
فکس : (021) 33985603

User Guide Industrial Actuator

Model: IA5



CAUTION:



The load should be centered on the operating direction.

Side Load is NO good for Actuator.

LIMIT SWITCH

Caution

Make sure no rotating of the inner tube while the motor is running.

RESET LIMIT

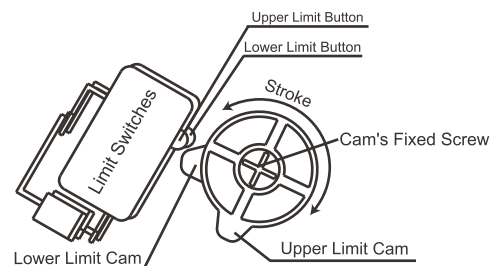
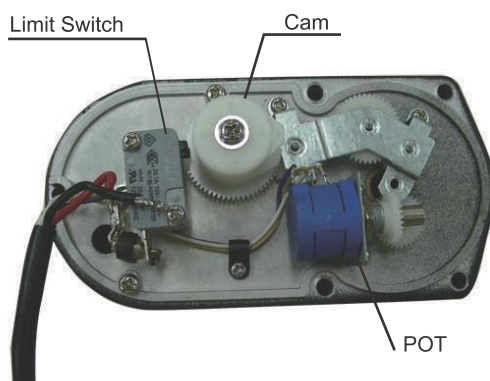
The most extended position is defined by the "Upper Limit Cam", and the most retracted position is defined by the "Lower Limit Cam" as well. Please set the limit positions just follow the rules below, if necessary.

Step 1. If the actuator has been installed, uninstall it first and then remove the gearbox cover.

Step 2. Connect the power wire to correct AC power and let the actuator starts retracting till the switch of lower limit is pressed by Cam, then the motor stops immediately. Now you can turn the inner tube in clockwise or counter-clockwise direction to the demanded position. Then, the lower limit is set.

Step 3. Let the actuator extends to the position you want, and adjust the "Upper Limit Cam" to press the upper limit switch directly, then the demanded stroke is done after you lock the Cam's screw.

Step 4. This operation can be executed only on IA5 with IP54 grade, and there is an extra paper seal for replacement after resetting limit. It's forbidden to execute this operation on IA5 with IP65 grade.



Note 1 : To avoid damaging the plastic gears under the Limit Cam, please hold Upper & Lower Limit Cam when you tighten or loosen the cam's screw .

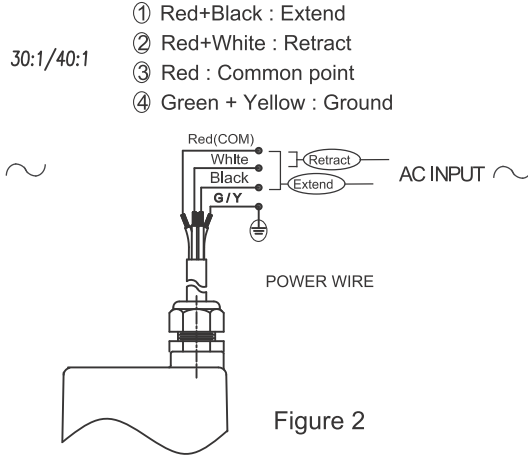
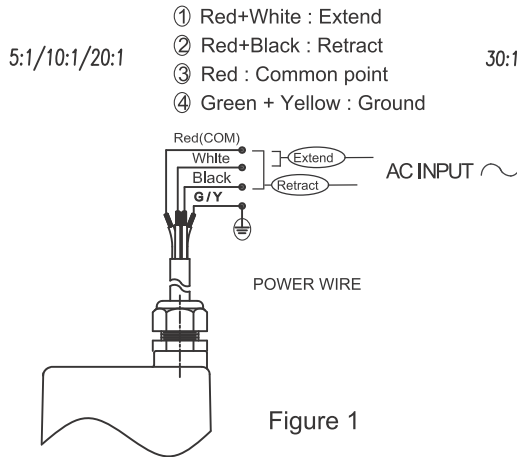


WIRE CONNECTION

There are 2 ways of power wiring, it is base on the gear ratio, when choosing the standard or equipped POT IA5 actuator, then follow the rules below:

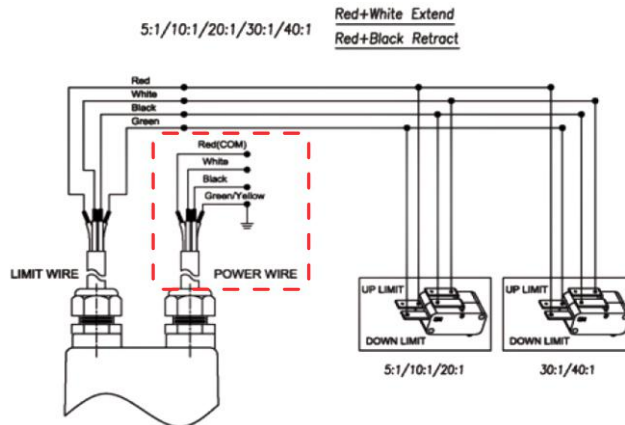
Standard or equipped POT

- If the gear ratio is 5:1/10:1/20:1, connect red & white wire to extend, red & black wire to retract, as shown in Figure 1.
- If the gear ratio is 30:1/40:1, connect red & black wire to extend, red & white wire to retract, as shown in Figure 2.



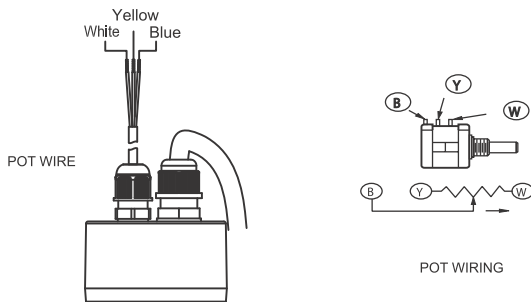
Equipped Limit Switch or Limit Switch and POT

- Connect red & white wire to extend.
- Connect red & black wire to retract.



POT wiring and value

- The POT value vs. stroke as shown in the table:



Value of Potentionmeter

The Ohm value between blue and white wire	
Stroke(mm)	Resistance
102	0.3~8.1 K
153	0.3~8.7 K
203	0.3~9.2 K
254	0.3~7.4 K
305	0.3~8.8 K
457	0.3~9.4 K
610	0.3~9.9 K
Tolerance: ± 0.3K	

NOTE

This appliance cannot be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

